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AUTHOR Head, L. Quinn; And Others
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ABSTRACT

The effects of race and sex on the scholastic performance of university freshmen were studied in a stratified random sample of 100 subjects obtained from 1,439 freshmen at a state university. There were 20 white males, 20 white females, 20 black males, and 20 black females, and 10 males and 10 females from other ethnic groups. A three by two factorial design was selected to analyze the data, with grade point average (GPA) as the dependent variable. The Tukey Honestly Significant Difference procedure was used as a follow-up step. Results indicate that race and sex did not interact to affect GPA. Even though significant differences for GPA means among males and females were not obtained, the analysis of variance indicated statistically significant differences between races. The Tukey procedure did not indicate any significant differences between any of the ethnic groups. It is suggested that repeating the study with larger samples would provide a clearer picture of racial differences. (SLD)

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L. Quinn Head

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THE EFFECTS OF RACE AND GENDER ON THE ACADEMIC PERFORMANCE OF FIRST TIME UNIVERSITY FRESHMEN

L. Quinn Head and J. Charles Walker
Jacksonville State University
and
Jimmy D. Lindsey
Southern University

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ABSTRACT

Since it is important for educational institutions to identify groups that are high risk academically in order to deal effectively with student attrition by establishing unique programs oriented toward their special needs, it is necessary to make such determinations by conducting databased research. Thus, the purpose of this study was to determine the effects of race (i.e. Whites, Blacks and other ethnic groups) and sex on the scholastic performance of university freshmen.

A stratified random sampling consisting of a total of 100 subjects was obtained form 1,439 freshmen at a state university. Then a three x two factorial design was selected to analyze the data in which Grade Point Average (GPA) was the dependent variable. The Tukey HSD procedure was used as a follow-up step.

Results indicated that race and sex did not interact to affect GPA, $p>.05$. Even though significant differences for GPA means among males and females were not obtained, $p>.05$, the ANOVA procedure indicated statistically significant differences between races, $p<.05$.

Implications of this study suggest that it should be repeated in which larger samples of non-white and non-black ethnic groups are obtainable and that GPA adjustments might possibly be made to improve its reliability.

INTRODUCTION

Since it is important for educational institutions to identify groups that are high risk academically in order to deal effectively with student attrition it is necessary to make such determinations by conducting databased studies. Research investigating the effects of ethnic factors on academic performance is frequently conducted (e.g. Wilson, 1980; Wilson, 1981). Additionally Elliott and Strenta (1988) pursued differences in scholastic achievement by ethnicity as well as by gender. The purpose of this present study was to determine the effects of race (i.e. Whites, Blacks and other ethnic groups) and sex on the scholastic performance of university freshmen at a state institution of higher education to establish unique programs oriented toward the special needs of any group identified as being at risk academically.

METHOD

A stratified random sampling consisting of a total of 100 subjects (i.e. n=20 for white males, white females, black males and black females; n=10 for males as well as females of other ethnic groups)[2] They were selected from 1,439 freshmen (i.e. the N's for white males, white females, black males, black females as well as males and females of other racial groups were 509, 579, 129, 194, 16 and 12, respectively) at a state university. Then a three x two factorial design was selected to analyze the data in which Grade Point Average (GPA) was the dependent variable. The Tukey Honestly Significant Difference (HSD) procedure was used as a follow-up step when analysis of variance (ANOVA) detected statistical significance. An .05 probability level was the criterion for significance.

RESULTS

The following outcomes were obtained from the analyses of data by using the statistical programs from the Statistical Package for Social Sciences (SPSS). Since the homogeneity of variance assumption was supported, the ANOVA procedure was reviewed. The results indicated that race and sex did not interact to affect GPA, $F(2, 94) = .157$, $p>.05$. Thus, the main effects of the data analysis were considered which indicated the following: (1) the sex of the freshmen did not significantly affect academic performance, $F(1, 94) = .187$, $p>.05$; yet, (2) the freshmen's race did have a statistically significant effect on their scholastic achievement $F(2, 94) = 3.316$, $p<.05$. Therefore, Tukey's HSD procedure was now used as a follow-up step to determine which group(s) differed statistically from the other groups. Even though the GPA mean (2.39) for ethnic groups other than Whites or Blacks was higher than the GPA averages for Whites (2.02) or Blacks (1.69), it was not statistically significant.

DISCUSSION

It is difficult to explain why the ANOVA procedure indicated a statistically significant outcome for race; yet, the Tukey HSD follow-up step did not reveal significant differences between any of the ethnic groups. Possibly, if this study were repeated at a university in which larger samples of non-white and non-black ethnic groups were obtainable, then statistically significant results between the various racial groups might be detected. Additionally, Elliott and Strenta (1988) indicated that adjusting grade point averages for differences in departmental grading standards improved the reliability of the criterial grade averages for gender as well as race. Thus, the results of this investigation when viewed in terms of the conclusion reached by Elliott and Strenta (1988) produces skepticism as to the efficacy of the GPA as accurately reflecting academic achievement. Since the rigorousness in grading practices can vary considerably between departments or even different instructors within the same department teaching the same course, some standardization regarding grading appears necessary in order for the GPA to more reliably refect scholastic performance.

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